



The Hilltop Institute

analysis to advance the health of vulnerable populations

Nebraska PDMP Case Study

August 2, 2018

Alice Middleton & Kevin Borchert

Nebraska Prescription Drug Monitoring Program (PDMP)

- Overview
- Implementation Model
- Funding and Costs
- Data Reporting and Provider Access
- Nebraska Results and Lessons Learned

Overview

- Nebraska (NE) set the precedent in Jan. 2018 by establishing the first PDMP to collect data on all prescription information
- NE has created a model for prescription information collection and usage
- The model has potential to aid in resolving opioid and substance use disorder issues, as well as allowing providers to make better informed treatment decisions

Legislation

- NE LB 237 (2011) – Creation of a PDMP
 - Prevent misuse of prescription drugs in an efficient and cost-effective manner
 - Allow doctors and pharmacists to monitor the care and treatment of patients for whom a prescription drug is prescribed
 - Identified NE Department of Health and Human Services (DHHS) and NE Health Information Initiative (NeHII) as collaborative partners to administer the PDMP
 - Prohibit use of state funding to implement or operate the PDMP

Legislation

- NE LB 1072 (2014)
 - Prevent misuse of controlled dangerous substances (CDS)
 - Repealed the no-funding stipulation

- NE LB 471 (2016)
 - Establish framework of the PDMP system
 - All CDS reported to the PDMP starting January 1, 2017
 - All prescriptions reported to the PDMP starting January 1, 2018
 - Allow prescribers and dispensers to access the system at no cost

Legislation

- NE LB 223 (2017)
 - Amend LB 471 to comply with HIPAA
 - Require veterinarians to submit CDS prescription drug information starting July 2018
 - Require new users of the PDMP to complete a training
 - Allow for a designee of a prescriber or dispenser

- NE LB 1034 (2018)
 - Language clarifications
 - Exclude animal non-CDS
 - Clarify pharmacist use
 - Remove conflicting dates for veterinarians to report data

Implementation Model

- Contracted with the NeHII Health Information Exchange (HIE) to host the PDMP
 - NeHII is a non-profit that runs the state HIE
 - Public/private governance model
 - Certified as a Qualified Clinical Data Registry by the Centers for Medicare & Medicaid Services (CMS)
- Implementation and participation fees covered through federal grant funding from various agencies

Implementation Model

- Surescripts supplies data from pharmacy benefit management (PBM) systems and retail feeds to capture self-pay prescriptions
- Data is accessible to registered and certified providers
- Data is available through NE DHHS online portal

Implementation Model

- Data is encrypted and stored on a HIPAA-compliant database
- Focus is on patient safety
- Data is stored by dispensing record
- Application access controlled through encryption

Funding

- Federal grants
 - Centers for Disease Control and Prevention: \$4 million over four years
 - Bureau of Justice Assistance: \$500,000 over two years
 - Office of the National Coordinator for Health Information Technology: \$3 million over two years
- Currently supported by a mix of public (grants, state) and private (hospitals and payers) funding

Cost

- Estimated revenues exceeded costs for the HIE in 2017
- No cost to access the PDMP for all providers and dispensers
- Hospitals and insurers payment for HIE access
 - Hospitals: \$500 monthly fee
 - Insurers: \$25,000 annual fee

Data Reporting

- Required to report: pharmacies, mail service pharmacies, veterinarians, other dispensers
- Who can access: physicians, nurses, pharmacists, designated licensed pharmacy staff, other credentialed health professionals, other dispensers
- As of 2018 all prescriptions including non-CDS are required to be submitted, with some exemptions

Data Reporting - Patient Consent


- Patients enrolled in HIE if provider is enrolled
- Patients can opt out of HIE, but not the PDMP
- Consumer education efforts are being pursued to increase confidence in HIE

Data Reporting



- Data uploaded to database daily by prescribers
- Dispensers required to report within one day of dispensing
- Systems either use software vendor for data entry or do manual entry

NEBRASKA: RESULTS TO DATE AND LESSONS LEARNED



PDMP Portal

 Loading...




DASHBOARDS & APPS


-  My Apps
-  Link Marketplace

ACCOUNT

-  My Account
-  Settings


HELP & SUPPORT

-  Help Center
-  Privacy & Terms
-  Sign Out




NeHII HIE users


PDMP users



Optum™ Data Exchange
HIE 2.0



Nebraska PDMP



Nebraska Health Information Initiative

CONTACT US:

Phone: 1-866-978-1799

Email: Support@NeHII.org

HIE Pathway
Any HIE participant

PDMP Pathway
Prescribers (MD, PA, APRN, DDS)
Dispensers (RP)
Designees (RN, Pharm tech)

HIE PDMP/Medication History

Watson, John

DOB: 06/04/1980 (37 y) MRN: (Family Practice of Grand Island) 1.3057.1.1
Gender: Male



04/23/2009	Office Visit Est Level 4	Difficulty Breathing	Adelson, Michael, M.D.	MARTINSBURG VAMC
04/25/2000	Office Visit Est Level 3	Chest Discomfort	Adelson, Michael, M.D.	MARTINSBURG VAMC

Immunizations (2)

	Date	Drug Name	Dose	RX By
	05/15/2009	Influenza Virus Split 3 Yrs And Above For Intramuscular Use	0.25 ML	Adelson, Michael, M.D.
	02/21/2008	Tetanus immune globulin (TIG), human, for intramuscular use	0.25 ML	Adelson, Michael, M.D.

Allergies (7)

	First Noted	Allergy	Reaction	Severity	Group	Reported By
	04/30/2010	Amoxicillin	Anemia/Blood Disorders	Severe	Drug allergy	Cynthia A. Grillo, M.D.
	04/25/2000	Bee Stings	Skin Rashes/Hives	Severe	Allergy to substance	Cynthia A. Grillo, M.D.
	05/24/2010	Egg or Chicken-derived Drugs	Shock/Unconsciousness	Severe	Allergy to substance	Cynthia A. Grillo, M.D.
	01/13/2011	Metaxalone	Shock/Unconsciousness	Moderate to severe	Drug allergy	Cynthia A. Grillo, M.D.
	01/13/2011	TeQuin	Asthma/Shortness of Breath	Mild to moderate	Drug allergy	Cynthia A. Grillo, M.D.
	04/25/2000	Tetracycline	Asthma/Shortness of Breath	Moderate	Drug allergy	Cynthia A. Grillo, M.D.
	03/29/2010	Zyprexa	Nausea/Vomiting/Diarrhea	Mild	Drug allergy	Cynthia A. Grillo, M.D.



Medications (7)

[Search Medication History](#)

Patient PDMP Queries – Access through PDMP portal

Search Medication History

Enter Patient Information

LAST NAME*

wa

FIRST NAME*

j

DOB

06/04/1980

Gender

Not Specified

City

Minimum of 2 Letters

ZipCode

Minimum of 2 Numbers

Search


Clear

Patient Search Results


Disclaimer: You are selecting one or more patients to combine together into a single-use query. Please note any selections of multiple patients and use of query results are at the discretion of the user. Selections may or may not include all aliases for a particular patient. Patient selections will not be saved for future use.

Combine and display

ID	Patient Name	DOB	Gender	Species	Address	City	Zip	Telephone #
<input type="checkbox"/> 1	John Watson	01/01/1900	U		123 First Street	Omaha	68111	
<input checked="" type="checkbox"/> 2	Jon Watson	06/04/1980	M		Thrthtrh	Trhtrh	69005	
<input type="checkbox"/> 3	Joan Watson	06/04/1980	F		1313 Mockinbird Lane	Mockinbird heights	69005	1111123344
<input checked="" type="checkbox"/> 4	John Watson	06/04/1980	M		1234 EL CAMINO REAL	Mountain view	94035	
<input checked="" type="checkbox"/> 5	Johnny Watson	06/04/1980	M		1313 Mockinbird Lane	Mockinbird heights	69005	1111123344
<input type="checkbox"/> 6	John (beagle) Watson	06/04/1980	M		1313 Mockinbird Lane	Mockinbird heights	69005	1111123344


NEBRASKA
 Good Life. Great Mission.
 DEPT. OF HEALTH AND HUMAN SERVICES
 PRESCRIPTION DRUG MONITORING PROGRAM
NeHII Nebraska Health Information Initiative

18

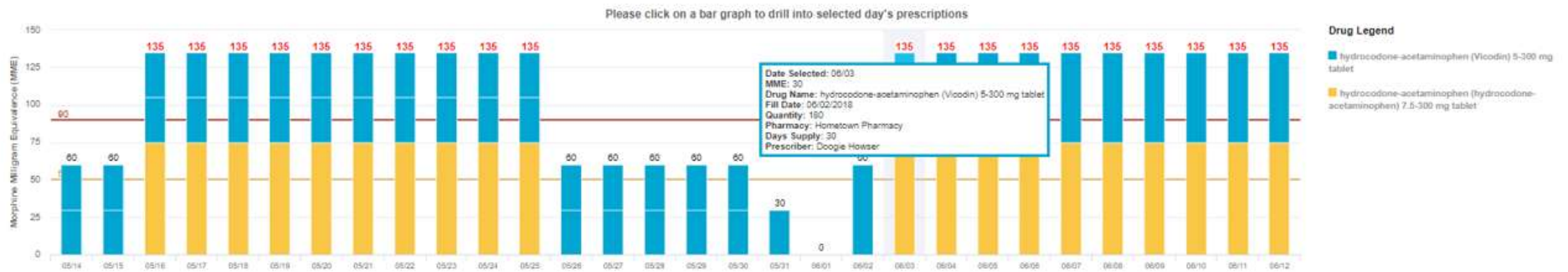

NeHII Nebraska Health Information Initiative

MME Alert

MME Assessment: Last 30 Days

107 30 day Average 135 7 day Average

View:  



Date selected: 06/03/2018

Prescription(s): 3

Drug Name	MME	Fill Date	Sold Date	Quantity	Days Supply	Prescriber	Pharmacy
hydrocodone-acetaminophen (hydrocodone-acetaminophen) 7.5-300 mg tablet	75	06/03/2018	06/05/2018	100	10	Doogie Howser	Test Pharmacy
hydrocodone-acetaminophen (Vicodin) 5-300 mg tablet	30	06/02/2018	06/02/2018	180	30	Doogie Howser	Hometown Pharmacy
hydrocodone-acetaminophen (Vicodin) 5-300 mg tablet	30	06/02/2018	06/02/2018	180	30	Doogie Howser	Hometown Pharmacy

Multiple Provider Episode Detail

Multiple Provider Episodes

4
3

Multiple Provider Episodes
* Last 3 Months

5
4

Multiple Provider Episodes
* Last 6 Months

Select Time Range:
6 Months

Unique Prescribers Visited (5):

Leonard McCoy	NPI: 999999985, DEA: ZZ9999985 (999) 111-1225
Doogie Howser	NPI: 999999985, DEA: ZZ9999985 (999) 111-1225
Frank N Stein	NPI: 999999985, DEA: ZZ9999985 (999) 111-1225
Beverly Crusher	NPI: 999999985, DEA: ZZ9999985 (999) 111-1225
Gregory House	NPI: 999999985, DEA: ZZ9999985 (999) 111-1225

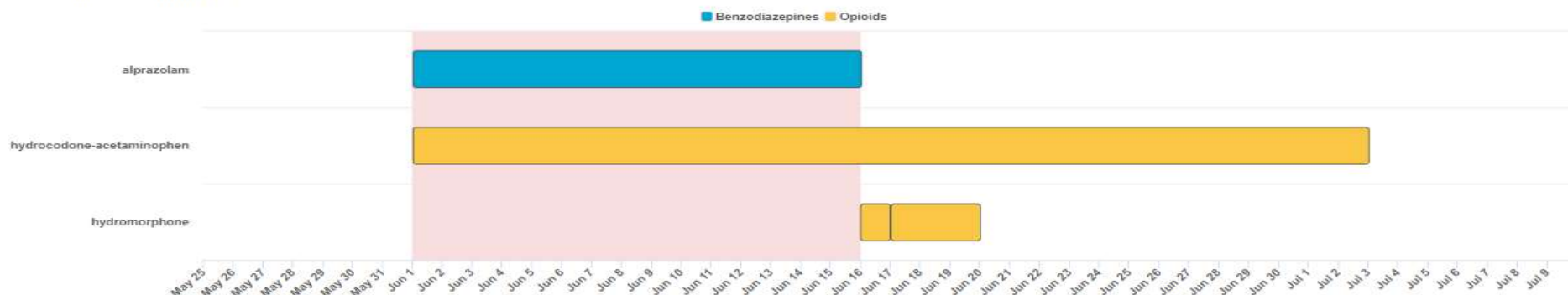
Unique Pharmacies Visited (4):

Kevin s Pharmacy	42nd & Emile St, Omaha, NE, 68195 (402) 550-9992
Kevin s Pharmacy	42nd & Emile St, Omaha, NE, 68195 (402) 550-9992
Test Pharmacy	42nd & Emile St, Omaha, NE, 68198 (402) 550-9999
Hometown Pharmacy	42nd & Emile St, Omaha, NE, 68195 (402) 550-9992

Overlapping Opioid/Benzodiazepine Alert Detail

Overlapping Therapy Alert: Last 45 days

Medications Timeline



Overlapping Medications

Category	Drug Name	Fill Start Date	Fill End Date	Sold Date	Day Supply	Quantity	Prescriber	Pharmacy
Overlapping Period: 06/01/2018 - 06/15/2018								
	alprazolam (alprazolam) 1 mg tablet	06/01/2018	06/15/2018	06/01/2018	15	15	Victoria Veterinarian	Newbie Pharmacy
	alprazolam (alprazolam) 1 mg tablet	06/01/2018	06/15/2018	06/01/2018	15	15	Victoria Veterinarian	Newbie Pharmacy
	hydrocodone-acetaminophen (Vicodin) 5-300 mg tablet	06/01/2018	06/30/2018	06/01/2018	30	180	Gregory House	Hometown Pharmacy
	hydrocodone-acetaminophen (Vicodin) 5-300 mg tablet	06/01/2018	06/30/2018	06/01/2018	30	180	Gregory House	Hometown Pharmacy
	hydrocodone-acetaminophen (hydrocodone-acetaminophen) 7.5-300 mg tablet	06/02/2018	06/11/2018	06/03/2018	10	100	Doogie Howser	Test Pharmacy
	hydrocodone-acetaminophen (hydrocodone-acetaminophen) 7.5-300 mg tablet	06/02/2018	06/11/2018	06/03/2018	10	100	Doogie Howser	Test Pharmacy
	hydrocodone-acetaminophen (Vicodin) 5-300 mg tablet	06/03/2018	07/02/2018	06/05/2018	30	180	Doogie Howser	Hometown Pharmacy
	hydrocodone-acetaminophen (Vicodin) 5-300 mg tablet	06/03/2018	07/02/2018	06/05/2018	30	180	Doogie Howser	Hometown Pharmacy
	hydrocodone-acetaminophen (hydrocodone-acetaminophen) 7.5-300 mg tablet	06/05/2018	06/14/2018		10	100	Doogie Howser	Test Pharmacy
	hydrocodone-acetaminophen (hydrocodone-acetaminophen) 7.5-300 mg tablet	06/05/2018	06/14/2018		10	100	Doogie Howser	Test Pharmacy
	hydromorphone (Dilaudid) 0.5 mg/0.5 mL syringe	06/16/2018	06/16/2018	06/17/2018	1	1	Beverly Crusher	Kevin s Pharmacy
	hydromorphone (Dilaudid) 0.5 mg/0.5 mL syringe	06/16/2018	06/16/2018	06/17/2018	1	1	Beverly Crusher	Kevin s Pharmacy
	hydromorphone (Dilaudid) 0.5 mg/0.5 mL syringe	06/17/2018	06/19/2018	06/18/2018	3	0.0005	Beverly Crusher	Kevin s Pharmacy

Reporting all dispensed prescriptions

- ▶ Required reporting as of January 1, 2018
- ▶ Comprehensive medication history
 - 10 x more data than traditional PDMP's that include controlled substances only
- ▶ *Patient safety tool*
- ▶ Allow clinicians to make better informed decisions
- ▶ Identify medications from multiple prescribers and pharmacies
- ▶ Identify potential drug interactions, allergies
- ▶ Provide a valuable resource in the event of natural disasters, system power interruptions
- ▶ Tool for medication reconciliation

By the Numbers – Prescriptions

- ▶ January 1 – December 31, 2017
 - 3,882,974 dispensed prescription records
- ▶ January 1 – June 30, 2018
 - 15,795,016 dispensed prescription records
 - 14,220,549 (90%) dispensed non-controlled substances
- ▶ 2017 Average 10,638 Rx/day
- ▶ 2018 Average 87,265 Rx/day

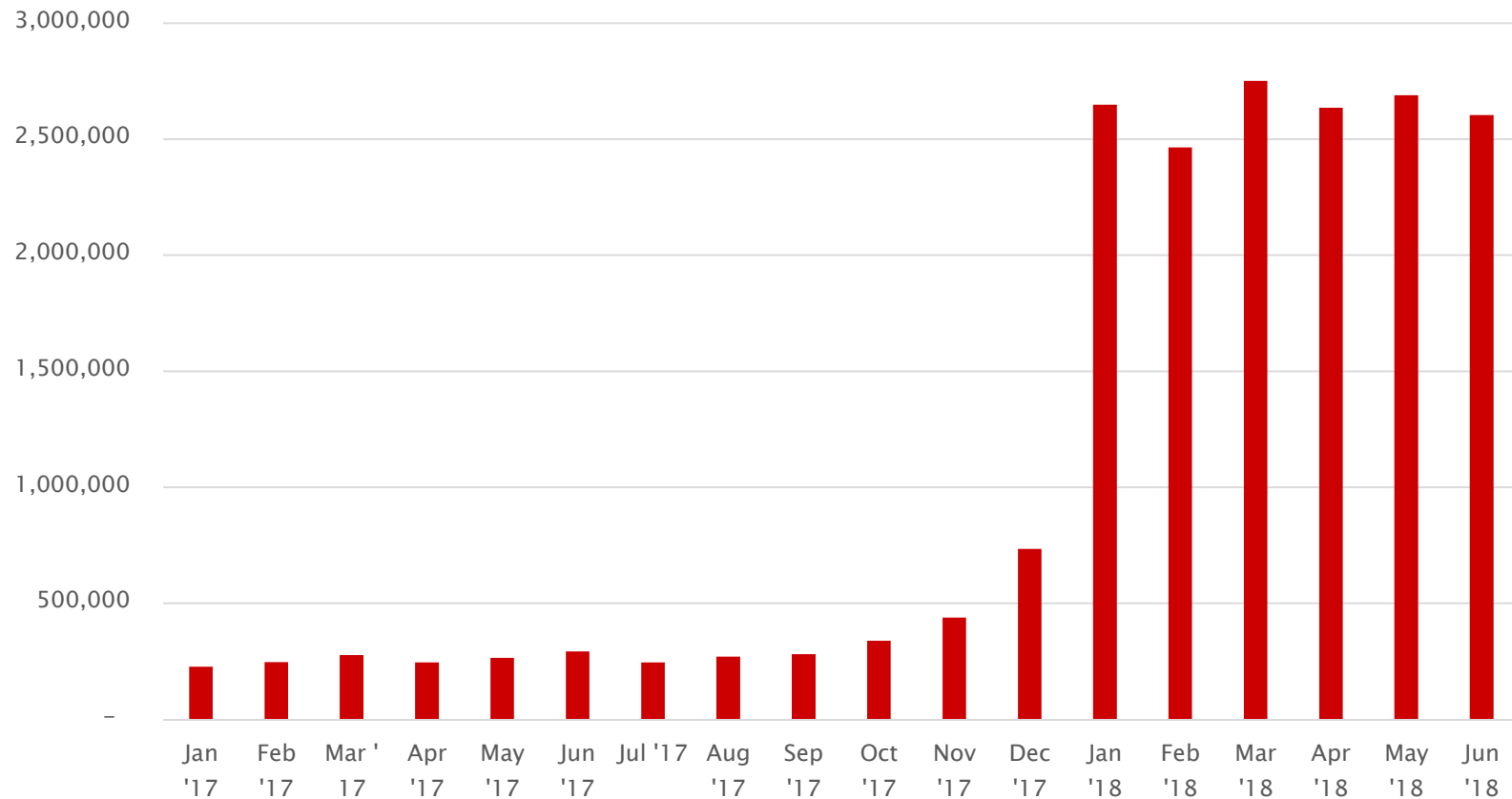
By the Numbers – Enrolled Users

- ▶ 6,911 Enrolled users of the PDMP (as of 6/29/18)
 - 4,625 prescribers (MD, APRN, DDS, DVM, PA)
 - with address in NE, KS, MO, IA, SD, WY, CO
 - 1,883 dispensers (i.e., pharmacists)
 - with address in NE, KS, MO, IA, SD, WY, CO
 - 403 designees (e.g., nurses, pharmacy technicians, pharmacist interns, etc.)

Nebraska PDMP Reported Data

January 2017 – June 2018

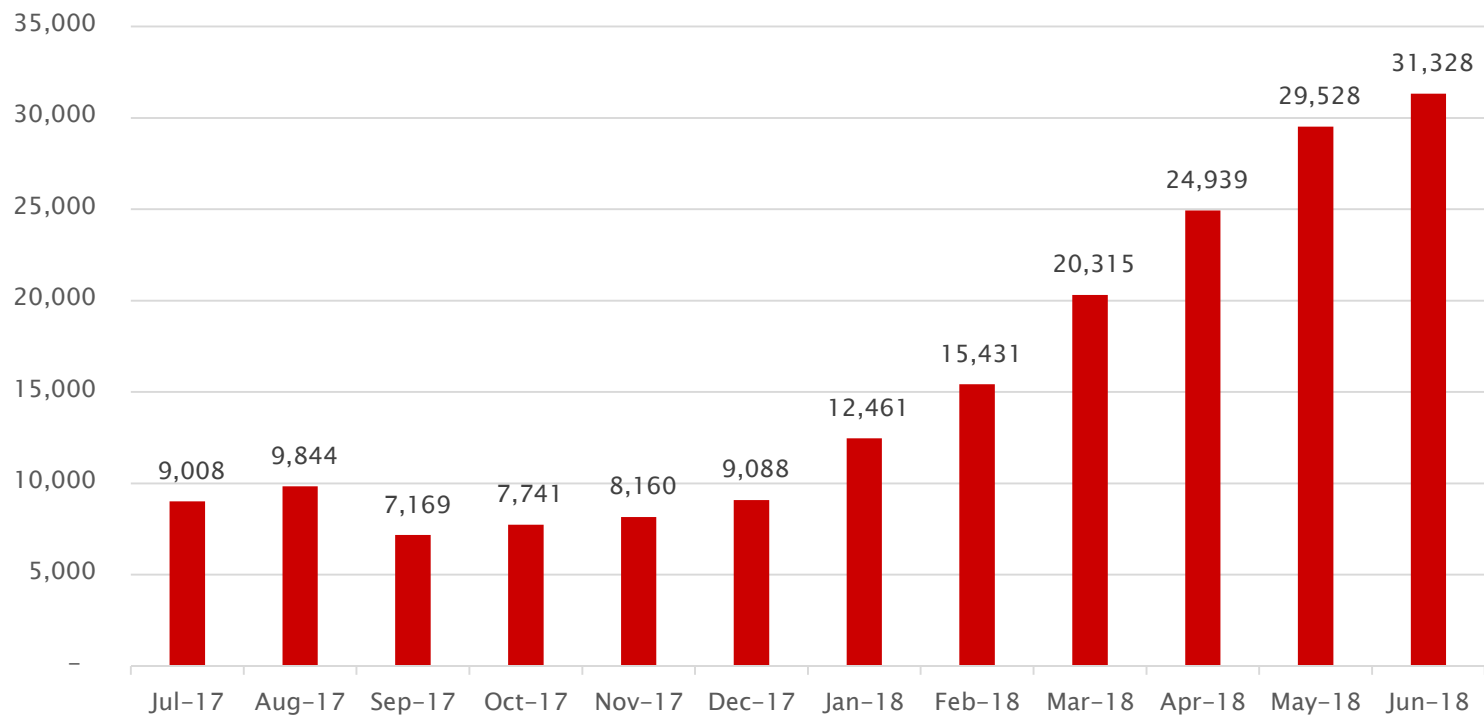
Monthly # Unique Dispensed Prescriptions Reported



Queries

July 2017 – June 2018

Unique Queries per Month



Interoperability

- ▶ Federal recognition and involvement of addressing opioid epidemic
- ▶ Interstate data sharing
 - Two primary networks/hubs
 - Opportunities via HIE's
- ▶ Integration
 - Direct workflow integration
 - HIE
 - Electronic health record (EHR)
 - Pharmacy Software System

Opportunities for PDMPs

- Easy access
 - Workflow integration
 - Interoperability
 - Workflow integration
 - Directly access through HIE, EHR, or pharmacy software
 - Single Sign-On (SSO)
 - Interstate data sharing

Lessons Learned for Success

- ▶ Communication
 - Early, frequent notification to pharmacies and vendors
- ▶ Cooperation
 - Several pharmacies have never reported
- ▶ Collaboration
 - Relationship building
 - Call vendors
 - Status updates
 - Test accounts to validate files
- ▶ Error monitoring
- ▶ Better quantity and quality of data

Future Opportunities

- ▶ Data analytics
 - Tableau to develop metrics, measures, maps
- ▶ Quality Improvement Initiatives
 - Opioid use
 - Benzodiazepine use
 - Chronic disease
 - Diabetes without statin
- ▶ Medication compliance/adherence
- ▶ Medication reconciliation
- ▶ Meaningful Use PDMP specialized registry

About The Hilltop Institute

The Hilltop Institute at the University of Maryland, Baltimore County (UMBC) is a nationally recognized research center dedicated to improving the health and wellbeing of vulnerable populations. Hilltop conducts research, analysis, and evaluations on behalf of government agencies, foundations, and nonprofit organizations at the national, state, and local levels.

www.hilltopinstitute.org

Contact Information

Alice Middleton JD
Chief of Staff
The Hilltop Institute, UMBC
410.455.6759
amiddleton@hilltop.umbc.edu
www.hilltopinstitute.org

Kevin C. Borchert
PDMP Program Director
Nebraska Health Information Initiative
402.290.2635
kborchert@nehii.org
www.nehii.org